Remarks

The Applicants have amended Claim 11 so that it recites a plurality of engaging units provided on the base plate each of which engages and disengages each of the deposition masks and the base plate by applying force to each of the deposition masks against the base plates such that the position of each deposition mask is adjusted relative to base plate independently of the other deposition masks while each of the deposition masks is disengaged. Support for the amendment may be found in a variety of locations in the Applicants' original disclosure. Examples include the text spanning page 10, second line from the bottom to page 11, line 8 and page 11, second line from the bottom to page 12, line 8. Entry of the amendment into the official file and consideration on the merits is respectfully requested.

The Applicants note with appreciation the withdrawal of the previous rejection of Claims 11 and 14. The Applicants also acknowledge the new rejection of Claims 11 and 14 based on the combination of Narabe and Schweitzer with Fujimori. The Applicants respectfully submit that even if one skilled in the art were to make the hypothetical combination, the methodology resulting from such a combination would still not result in the method recited in the Applicants' solicited claims. Reasons are set forth below.

The Applicants first note with appreciation the Examiner's detailed comments hypothetically applying Narabe and Schweitzer to Fujimori. The Applicants also note with appreciation the Examiner's frank acknowledgement of the many deficiencies of Fujimori including the failure to teach the step of using a camera to observe alignment marks formed on the integrated mask and the single substrate, the failure to teach any sort of alignment of the mask and substrate, the failure to disclose detecting alignment marks of the frame in each of the deposition marks, the failure to teach that alignment of the mask can be carried out individually, the failure to disclose a plurality of engaging units provided on the frame to engage and disengage each of the deposition marks and the failure to disclose adjusting relative position between the frame in each mask prior to engaging the integrated masks to the substrate or engaging the masks to the frame after adjusting the relative positions. As a consequence of these acknowledged failures, the rejection turns to Narabe and Schweitzer to make up for such deficiencies.

However, the Applicants respectfully submit that there are further issues with Fujimori that render the use of Fujimori as the primary reference ineffective, even if combined with

Schweitzer and/or Narabe. This is particularly found in the first full paragraph following the rejection on page 2 wherein the rejection states that Fujimori discloses:

> A "division type" mask can be used wherein n independent shadow masks can be attached to a single frame, thereby providing for high precision patterning. The frame (i.e., the claimed base plate) has a plurality of openings on which the n deposition masks are arranged over.

The Applicants respectfully submit that Fujimori does not actually disclose this. The Applicants believe that the difficulties associated with the Fujimori disclosure is because of the machine translation of that document which is at best confusing in many important aspects. The Applicants have therefore had portions of the Fujimori disclosure translated in a more effective and accurate way and enclose translated paragraphs [0016], [0046], [0047] and [0057] for the Examiner's convenience.

It can be seen from the enclosed translated paragraphs that Fujimori actually discloses something rather different than what can be assumed from the machine translation. Thus, it can be see that Fujimori does not disclose "a single frame" upon which n independent shadow masks can be attached. Of course, this is a fundamental basis of the rejection and with the failure of such disclosure, the rejection is readily seen as being unsustainable.

Reference to the English translation paragraphs reveals that Fujimori discloses the use of four shadow masks at once through a single substrate. One shadow mask comprising a mask portion 31 and a plurality of openings 32 is fixed on one frame 34 as shown in Fig. 3. In other words, Fujimori discloses using four frames at once to a single substrate. The four frames arranged in front of the single substrate are contacted with the substrate by a magnet provided on the rear side of the substrate. After that, an alignment of each of the four frames is performed for the single substrate. Also, it is not clear from the Fujimori disclosure how each of the frames is aligned to the substrate. Thus, one skilled in the art can only imagine that each of the frames can be moved for alignment to the substrate under the influence of magnetic force from the magnet provided on the rear side of the substrate.

Thus, the Applicants respectfully submit that Fujimori does not disclose the base plate as specifically recited in the Applicants' Claim 11. This means that Fujimori does not disclose a plurality of engaging units provided on the base plate. This further means that Fujimori does not disclose the integrated mask comprising the base plate and a plurality of engaging units as

specifically claimed. In that regard, the Applicants have amended Claim 11 as previously indicated to emphasize this distinction. The result is that even if Schweitzer and Narabe are hypothetically combined with Fujimori, the resulting methodology would still fail to result in the Applicants' base plate and the Applicants' plurality of engaging units provided on the base plate.

In any event, the engaging and disengaging mechanism is not disclosed by Schweitzer. Instead, Schweitzer discloses a pair of spaced pins 112 and 114 projecting from mask plate 44. However, those pins are previously fixed in alignment positions and merely receive the frame. Therefore, there is no adjustable function between the pins 112, 114 and the frame 74. Schweitzer discloses the mask plate 44 having a plurality of typical masks 111(a). However, each of the typical masks is used to produce each of the substrates 107, one by one. Therefore, Schweitzer also does not disclose producing a single substrate having n (organic EL) devices.

Narabe is also deficient in that respect. Therefore, even if Narabe is combined with Schweitzer and Fujimori, the resulting combination would still not result in the subject matter of the Applicants' Claims 11 and 14. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

T. Daniel Christenbury
Reg. No. 31,750
Attorney for the Applicants

TDC/vbm
(215) 656-3381

Fujimori et al. (JP 2000-113978)
Partial English translation

Paragraph [0016]:

Almost all shadow masks themselves have no sufficient stiffness and mechanical strength. The shadow mask, therefore, is usually used in a state that it is jointed with a frame. In a method of the present invention for forming n-planes (n is two or more integers) organic electroluminescence elements on a single substrate, n-frames on each of which a shadow mask is jointed being arranged at once are used. It is called as a "division type". In this case, n-shadow masks independent each other are used and therefore there is a large freedom for changing a mask. Further, it can be obtained a high accuracy patterning since each of the masks can be independently aligned.

Paragraph [0046]:

Twelve (12) same shadow masks each of which has mask portions and reinforcing wires both of which are provided in a same plane as shown in Fig. 3 were prepared as for patterning luminescent layers. The single shadow mask has a shape of 120x84 mm, a thickness of the mask portion 31 of 25 μm, a length and a width of a stripe opening 32 of 64 mm and 100 μm, a pitch of the opening of 300 μm, and a number of the opening of 272. At each of the stripe openings, the reinforcing wires each of which is perpendicular to the opening and has a width of 20 μm and a thickness of 25 μm are provided with an interval of 1.8 mm. Each of the shadow

masks was fixed to a stainless steel frame 34 having the same widths of 4 mm in a shape. Such formed twelve (12) shadow masks were used in three (3) groups each of which consists of four (4) shadow masks. In this example, electroluminescence elements were formed under the "divisional type". In this example, four (4) shadow masks were placed on a substrate in a sate that two shadow masks were arranged in the direction of up and down and two shadow masks were arranged in the direction of right and left.

Paragraph [0047]:

Four (4) same shadow masks each of which has a space 36 between a surface of a mask portion 31 and a reinforcing wire 33 as shown in Figs. 4 and 5 were prepared as for patterning second electrodes. The shadow mask has a shape of 120x84 mm, a thickness of the mask portion of 100 μm, a length and a width of a strip opening 32 of 100 mm and 250 μm, a pitch of the opening of 300 μm, and a number of the opening of 200. On the surface of the mask portion, reinforcing wires are arranged in a mesh-like form with a regular hexagonal structure having a width of 40 μm, a thickness of 35 μm and a space between two opposite edges of 200 μm. A height of the space is 100 μm in the same of the thickness of the mask portion. Each of the shadow masks is fixed on a stainless steel frame and used as same as the shadow mask for electroluminescence.

Paragraph [0057]:

In the same way as patterning the electroluminescence layer, four (4) second electrode shadow masks were arranged in front

of the substrate and each of the shadow masks and the substrate were contacted each other in a state that a magnet was provided the rear side of the substrate. In that time, a spacer 4 and the mask portion were arranged in the same position as shown in Figs. 10 and 11. The four (4) shadow masks were checked independently in its alignment and accuracies were promoted. In this state, second electrodes 8 were patterned by a deposition of aluminum with a thickness of 400 nm.